

UNITED STATES DEPARTMENT OF AGRICULTURE
Office of Land Use Coordination
Washington, D. C.

October 2, 1940.

MEMORANDUM NO. 68.

MEMORANDUM FOR FLOOD CONTROL FIELD REPRESENTATIVES OF SOIL CONSERVATION SERVICE, FOREST SERVICE, AND BUREAU OF AGRICULTURAL ECONOMICS.

(Through S.C.S., F. S. and B. A. E.)

Subject: Changed Form of Flood Control Memoranda;
Organization of Hydrologic Facilities in the Washington offices.

Attention is called to a change in the form of Flood Control Memoranda as they are to be issued under the modified flood control organization in Washington. These memoranda will be numbered in the existing series of numbers, and are for distribution to Washington bureau flood control personnel and field flood control representatives, i. e., Flood Control Coordinating Committee members, Working Committee members, Party Leaders, and Senior Representatives.

The following numbers are assigned to the respective instructions previously issued from this office:

Suggestions Relative to Form, Organization and Content of Flood Control Survey Reports, July 16, 1940, No. 66.

Interim Technical Instructions for the Conduct of Infiltrometer Investigations, August 23, 1940, No. 67.

For some time plans have been underway for the preparation of a series of statements on the "Structure and Functions of the Washington Flood Control Organization." This memorandum covers the "Organization of Hydrologic Facilities". Memoranda dealing with other phases of the organization will be issued from time to time.

E. J. Utz
E. J. Utz,
In Charge, Flood Control,
Office of Land Use Coordination.

(Attachment to Memorandum No. 68, October 2, 1940)

STRUCTURE AND FUNCTIONS
OF THE
WASHINGTON FLOOD CONTROL ORGANIZATION

ORGANIZATION OF HYDROLOGIC FACILITIES

It is now generally acknowledged that extensive use must be made of hydrologic procedures and data in evaluating the effects of the proposed flood control measures of the Department of Agriculture. It has become evident, moreover, that the hydrologic problems transcend in difficulty any other purely technical obstacles presented by the Department's flood control program.

To obtain adequate solutions to these hydrologic problems and to thus insure the success of the Department's efforts in the flood control field, the following steps have been taken:

1. The position of Technical Adviser on Hydrology has been established in the Office of Land Use Coordination.
2. Bureau Hydrologists have been appointed in both the Forest Service and the Soil Conservation Service.
3. Hydrologic Sections have been organized in each of these bureaus.
4. To assist the Technical Adviser in coordinating all hydrologic work a Hydrologic Sub-Committee has been formed.
5. Leading hydrologists have been retained as Consultants.

More detailed information on each of these hydrologic facilities is given below.

Technical Adviser on Hydrology

The Technical Adviser is a member of the staff of the Officer in Charge of Flood Control and, like the latter, is attached to the Office of Land Use Coordination. The principal function of the Technical Advisor is to coordinate all hydrologic activities connected with the Department's flood control program. In order to bring about complete coordination he will:

1. Act as Chairman of the Hydrologic Sub-Committee with power to make final decisions on controversial questions.

2. Act for the Officer in Charge of Flood Control in making final reviews of the hydrologic phases of preliminary examinations, work outlines, plans, and survey reports.
3. Promulgate standards that will govern the conduct of all hydrologic work undertaken in the Flood Control Program.
4. Act as the official representative of the Department's Flood Control Organization in its dealings with other departments and agencies in matters related to hydrology.
5. Serve as the official contact between the Hydrologic Consultants and all Flood Control offices.

The approval of the Technical Adviser will be required on the hydrologic phase of any Preliminary Examination Report, Work Outline, Work Plan, Survey Report, Plan for Revision, or similar material, unless his approval is waived by the Officer in Charge of Flood Control.

In dealing with field projects or bureau offices the Technical Adviser will work through regular bureau channels, unless specifically authorized to make direct contacts by the Advisory Committee, the Review Sub-Committee, the Administrative Sub-Committee, or the bureau affected. In general, he will advise field technicians through regular bureau channels and will make inspections in collaboration with bureau representatives.

The Technical Adviser will have no staff, but will utilize the facilities and personnel of the Hydrologic Sections, ordinarily by delegating technical responsibilities to the Bureau Hydrologists of the agency affected, and occasionally by requesting the detail of technical personnel to his office.

Bureau Hydrologists

The Bureau Hydrologists in the Soil Conservation Service and the Forest Service shall:

1. Serve as the representatives of these bureaus on the Hydrologic Sub-Committee.
2. Act as Heads of the Hydrologic Sections in their respective bureaus.

It is clear from the foregoing that the Bureau Hydrologists serve in a dual capacity. As members of the Hydrologic Sub-Committee they assist in coordinating all hydrologic activities in the manner explained subsequently under the heading "Hydrologic Sub-Committee." In this

committee function they act as instruments of the Office of Land Use Coordination, not of the Bureau to which they are appointed. On the other hand, in their capacities as heads of the Hydrologic Sections, they act as bureau representatives, receive their instructions from bureau officials and direct the flood control work of their bureaus in a manner, and to an extent, consistent with the authority delegated to them by their superiors within the bureaus.

Hydrologic Sections

In the Forest Service a Hydrologic Section has been organized under the Division of Forest Influences. A similar Section has been established in the Project Plans Division of the Soil Conservation Service. The organizational structure of these sections is shown by the appended chart.

An examination of the chart will indicate that the Records Unit of the SCS Hydrologic Section has no counterpart in the Forest Service organization. In the interests of economy the one unit will serve both bureaus. For the same reason the Sedimentation Specialist in the SCS Field Measurement Unit will conduct the sedimentation work of both Sections.

The more important functions of the units, or projects, constituting the Hydrologic Sections are summarized below:

- (a) Field Measurement Groups: Coordinating all hydrologic measurements made on Flood Control Surveys, including measurements made with infiltrometers, measurements of precipitation, run-off measurements, and the determination of the silt discharge of streams; developing standards for such measurements; inspecting field installations of measuring devices; and rendering service in the planning and execution of flood control activities requiring field measurements.
- (b) Analysis Groups: Analyzing and preparing for the use of Survey parties all hydrologic data thought to be of general application in the flood control program, particular attention being given to research data collected by the Soil Conservation Service and the Forest Service; developing improved procedures for the analysis and application of hydrologic data; testing procedures recommended by the consultants and preparing illustrative examples for field survey parties; inspecting analytical work conducted by field parties; assisting in the review of hydrologic plans, survey and other reports, conducting special studies, and otherwise acting as service units for the entire Flood Control program.
- (c) Damage-Hydrology Coordination Groups: Developing, in cooperation with the BAE, hydrologic procedures for calculating the benefits produced by flood control

programs of the Department; assisting to put these procedures into practical field use; assisting in the review of plans and reports; conducting special studies of flood frequencies and otherwise rendering service to the field survey parties.

- (d) Records Unit: Locating all hydrologic data that can be used to advance the flood control program of the Department in general, as well as records applicable to specific surveys; appraising the value of such records for the purposes to which they will be put; compiling data for the use of other units of the Hydrologic Sections and, when requested, for field survey parties; conducting special studies under the direction of the Bureau Hydrologists.

The services of the Hydrologic Sections will be made available to field survey parties upon request through regular bureau channels.

Hydrologic Sub-Committee

The membership of the Hydrologic Sub-Committee includes the Bureau Hydrologists, a representative of the Bureau of Agricultural Economics, and the Technical Adviser, the latter acting as chairman. The purpose of this group is to bring about complete coordination of all hydrologic phases of the Flood Control program.

The responsibility of the BAE representative will be limited to phases of the committee's work dealing with the coordination of the hydrologic and the economic aspects of flood damage and flood control benefit determinations, and to assisting in the development of sound sampling and statistical procedures for this purpose.

The Sub-Committee will assist in both the conduct of going activities and in the review and revision of reports on completed undertakings. To prevent possible confusion and the overlapping of authority, any direct contacts that the Hydrologic Sub-Committee may make with going projects will be authorized by the Administrative Sub-Committee.

When the Advisory Committee, the Administrative Sub-Committee, or the Review Sub-Committee desire hydrologic services they will transmit their requests and any necessary authorization through the Officer in Charge of Flood Control to the Technical Adviser as Chairman of the Hydrologic Sub-Committee. The Hydrologic Sub-Committee will consider each request and prepare recommendations. These recommendations will be routed through the Officer in Charge of Flood Control to the body originating the request.

When recommendations made by the Hydrologic Sub-Committee are not the result of requests by other bodies, but originate within the Sub-Committee itself, they will be directed to the Officer in Charge of

Flood Control. If the latter approves such recommendations, he will transmit them to the proper bureau officials who will then become responsible for issuing any instructions necessary to secure compliance.

Hydrologic standards for the Department's flood control work will be developed by the Hydrologic Sub-Committee with the assistance of the Hydrologic Sections and the Consultants. These standards will be promulgated by the Technical Advisor.

Through their membership on the Hydrologic Sub-Committee, the Bureau Hydrologists and the BAE representative will be able to keep themselves fully informed on all decisions of the Technical Advisor and all recommendations of the Consultants.

Hydrologic Consultants

At the present time the services of three Hydrologic Consultants are available to the Department of Agriculture. Each of those Consultants is a recognized authority in the field of hydrology, and each brings to bear upon the flood control problems of the Department a fund of knowledge gained during many years of experience in the practical application of hydrologic principles and techniques. To assist the Consultants in the formulation of their recommendations Associate Consultants and certain other personnel have been temporarily appointed.

The Hydrologic Consultants will act in a purely advisory capacity. They will, upon request, recommend methods for the solution of hydrologic problems; but they will not themselves direct survey activities or prepare Flood Survey Reports.

As in the past, all flood control undertakings will be carried out by personnel of the appropriate bureaus in accordance with instructions received through regular Departmental channels. In the formulation of these instructions, however, the most complete possible use will be made of the recommendations of the consultants.

It is contemplated that the services of the consultants will be most frequently utilized in the following ways:

1. By requesting them to formulate hydrologic procedures needed in conducting flood control surveys and in preparing reports.
2. By assigning to them for review and recommendations the hydrologic portions of important Flood Survey and related Reports.
3. By calling upon them for assistance in the planning of any special hydrologic studies that field personnel of the Department may be required to make in connection with flood control activities.

Flood control offices desiring the assistance of the Consultants will submit their requests through regular bureau channels to the Officer in Charge of Flood Control, who will authorize the Technical Adviser to submit to one or more of the Consultants those problems judged to be of sufficient importance to merit their attention. Heavy demands have already been made upon the Consultants and it is imperative that their services be requested only in matters of real moment. However, the appointments of the consultants are of a temporary nature, and for this reason it is important that all requests for their services be brought to the attention of the Technical Adviser at an early date. He will then be able to present the Department's flood control problems to the Consultants in the order of their urgency.

All work performed by the Hydrologic Consultants will be authorized in writing by the Technical Adviser under instructions from the Officer in Charge of Flood Control. When necessary, the consultants will be authorized to confer and correspond directly with intimately concerned field personnel on purely technical matters (when such authorizations are issued, all responsible bureau officials will be provided with copies so that they will be fully informed of the arrangements made.) In general, however, the Consultants will report directly to the Technical Advisor, and all contacts between the Consultants and the Flood Control organization will be made through that official.

If full use is to be made of the Hydrologic Consultants, it will frequently be necessary to provide them with such pertinent hydrologic data as may be available within the Department. They will, however, treat all data turned over to them as strictly confidential material and will not make it available to others in any form. There need be no hesitancy, therefore, in furnishing data requested by the Hydrologic Consultants. Unless the Consultants have been given prior authorization to make direct field contacts they will submit requests for data to the Technical Adviser.

It is obvious that the employment of Consultants in no wise diminishes the responsibility of Departmental personnel for the proper conduct of flood control surveys and for the ultimate success of the Department's flood control program. It is equally clear that the services of the Consultants will greatly improve the quality and authoritativeness of the Department's Flood Control Survey Reports and thus enhance the prospects for their general acceptance.

APPOINTMENTS

The personnel appointed to the key positions described in the foregoing are:

Technical Adviser:	Howard L. Cook
Bureau Hydrologist - SCS:	R. L. Stevens
Bureau Hydrologist - FS:	R. A. Hertzler
BAE Representative on the Hydrologic Sub-Committee:	N. A. Back
Hydrologic Consultants:	R. E. Horton Voorheesville, N. Y.
	W. W. Horner St. Louis, Mo.
	L. K. Sherman Chicago, Ill.

SOIL CONSERVATION SERVICE

				Bureau	
				Hydrologist	
:					
:					
Field	:	Analysis	:	Damage-	
Measure-	:	Unit	:	Hydrology	Records
ment				Coordination	Unit
Unit				Unit	

FOREST SERVICE

				Bureau	
				Hydrologist	
:					
:					
Field	:	Analysis	:	Damage-	
Measure-	:	Project	:	Hydrology	
ment				Coordination	
Project				Project	